

**Sudan University of Science and Technology  
College of Graduate Studies**

**Application of HACCP in Biosecurity of poultry Farm in  
Khartoum State**

**تطبيق نظام الهسب في نظام الامن الحيوي لمزارع الدواجن  
ولاية الخرطوم**

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## DEDICATION

*I dedicate this thesis to my father soul and mother, for always putting my well-being first.*

My brother,

My sisters,

My husband

And my friends

With love and respect... Widad

..

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## ABSTRACT

The study was conducted to evaluate the situation of poultry farms in Khartoum state and how far we are to apply biosecurity of poultry farm, to know the possibility to apply HACCP system in biosecurity of poultry farm. The data was collected by using a questionnaire, to get information about the biosecurity system on poultry farm and to assess the situation and how far we are to apply HACCPs in biosecurity. The survey covered 19 poultry farm semi( close and open system) in period of 4 months from February to June 2015. The samples were examined for isolation of bacteria E coli, Salmonella and staphylococcus to determine contamination level among the points for begin, mid and end of Poultry farm production period. Sampling was done according to systemic random methods, samples was collected from 5 farms. The swabs were taken from seven sites workers, feeders, wall, water, drinkers, floor, and feed, and duplicated. The results by sampling showed that the infection by Salmonella, E coli and Staphylococcus introduced in to poultry farm from many different sources such as workers, feeders, walls, water, drinkers, floor and feed. Questionnaire showed that 90% of the Open and semi close farms were fenced of all direction. 5km distance of nearest farm found in 6.7% in semi close and open system. 10% less of 2km distance of nearest farm was 36.7% in the tow system. The distance 200m between different ages 200% was 13.3% in semi close and 6.7% in open system and 80% in this case distance less than 20m. 72.4% of farms controlled movement of equipment and tools in the tow system. The ways to prevent entry of small animals found in 40% in semi close system and 16.7% in open system. The same result in methods to prevent entry of wild birds. No disinfectant sprayer in entrance of open system and 13.3% in semi close system. 50% of farms in tow

system have bathing in the entrance. 23.3% of farms in semi close system have rules to enter visitors, 10% of open farms have this rules. After cleaning and disinfecting farms samples are taken to measure the effectiveness of the process in 6.7% in semi close, 3.3% in open system. The disposal of dead birds in 40% of open farms burning in hole and 10% of this system disposal dead birds out door. Worker check health done in 10% of open and semi close system. No mixing between workers 36.7% in open farms 16.6% semi close system rid of dead birds the biosecurity measures level among poultry farms in Khartoum state could be classified into low in the both open and semi close system. . Government policy needs to facilitate the improvement of biosecurity adoption among poultry farmers. Routing visiting from veterinary authorities, and applied the law that every farm must have veterinary supervision

## ملخص البحث

أجرى هذا الدراسة لتقييم الوضع في مزارع الدواجن في ولاية الخرطوم والأيدينا تحت تطبيق إجراءات الأمان الحيوي لمزارع الدواجن، لمعرفة إمكانية تطبيق نظام تحليل المخاطر في مجال الأمان الحيوي بمنزرة الدواجن. وقد تم جمع البيانات باستخدام الاستبيان، للحصول على معلومات حول نظام الأمان الحيوي في مزارع الدواجن لتقييم الوضع ومدى في الأمان الحيوي وشمل المسح 19 الدواجن شبه مزرعة (نظام الوثيق المفتوح) في لمدة من 4 HACCPs ردنا تطبيق E أشهر في الفترة من فبراير إلى يونيو 2015 والعينات التي تم فحصها عزل لقلونية بكتيريا والسالمونيلا والمكورات العنقودية لتحديد مستويات التلوث بين النقاط لتبدأ، منتصف ونهاية الدواجن أخذ العينات لفترة الإنتاج الزراعي وتموفاً للأساليب العشوائية النظامية، وكانت العينات تم جمعها من 5 مزارع وتم أخذ مسحات من سبعة مواقع العمال، مغذيات، والجدران والمياه ويشربون، والكلمة، والأعلاف، وتكرار. E وأظهرت النتائج. وقبل أخذ العينات أُنزلت العدوى عن طريق السالمونيلا، القلونية والعنقودية قدم في مزارع عدواً من عدة مصادر مختلفة مثل العمال، مغذيات، والجدران، والمياه، ويشربون، وال direction.5km وشبه وثيق ومسجلة من كلال مسافة pen كلمت والأعلاف. أظهر الاستبيان أن 90% من المزارع 0 مسافة أقرب مزرعة KM وكانت أقل من 2%. 10% system من أقرب مزرعة وتوجدت في 6.7% في شبه وثيق ومفتوحة بين مختلف الأعمار 200% 13.3% في شبه قريو 6.7% في نظام مفتوح 36.7M في نظام السحب. كان مسافة 200% من المزارع التي تسيطر عليها حركة المعدات والأدوات في نظام السحب. 80m.72.4% في هذا المسافة حالة أقل من 20 طرفاً من دخول الحيوانات الصغيرة الموجودة في 40% في نظام شبه وثيق 16.7% في نظام مفتوح لعنقود نتيجة في طرفاً من دخول الطيور البرية. لا يخاطر في مداخل نظام مفتوح 13.3% في نظام شبه وثيق. 50% من المزارع في نظام سحبها الاستحمام في المداخل. 23.3% من المزارع في نظام شبه وثيق أقوا عدل دخول الزائرين، و 10% من المزارع المفتوحة لديها هذه القواعد. بعد تنظيف وتطهير المزارع وأخذ عينات لقياس فعالية عملية في 6.7% في شبه قريو، 3.3% في نظام مفتوح. التخلص من الطيور النافقة في 40% من المزارع المفتوحة حرق في حفرة 10% من هذا التخلص من نظام مبيد الطيور خارج الباب. الفحص الطبي العام لمعظم في 10% من نظام قريو المفتوحة وشبهه. يمكن تصنيفها في خطيبنا العمال 36.7% في المزارع المفتوحة 16.6% نظام وثيق شبه التخلص من الطيور النافقة مستوياً إجراءات الأمان الحيوي بين مزارع الدواجن في ولاية الخرطوم بالبدء بمستوى في المزارع

ظامنفتحو شبهو ثيق . . تحتالسياسةالحكومة لتسهيلو تحسينالتبنيالأمنا لبيولو جيبينأصحابمزارعالدواجن.  
توجيهالزائر ينمالسلطاتالبيطرية،وتطبيقالقانونالذييجبأن يكونكلمزرعةإشرافبيطري

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